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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,360	01/16/2004	Peter Visconti	MV-6076.1D	9925
27433 7590 03/19/2007 FOLEY & LARDNER LLP 321 NORTH CLARK STREET SUITE 2800 CHICAGO, IL 60610-4764			EXAMINER MACNEILL, ELIZABETH	
			ART UNIT 3767	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/19/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/759,360

Applicant(s)

VISCONTI ET AL.

Examiner

Elizabeth R. MacNeill

Art Unit

3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-13 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-13 and 16-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This action is in response to applicant's amendments submitted 5 February 2007.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by DeVALE (US #5,464,391).

Regarding claim 24, DeVale teaches "A cartridge cassette (#30, Col 3 line 39) adapted to mate with a surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with a pumping actuator, the cartridge cassette comprising: a pumping chamber (#64, Col 4, line 26); a flexible diaphragm covering the pumping chamber (#88, Col 5 line 25, Fig 6 for graduated cross-section, showing the indentation in the membrane near 92); an upstream valve (#28, Col 4 line 24) disposed in the cartridge adapted for fluid communication with a source of fluid and the pumping chamber; and a downstream valve (#34, Col 4 line 24) disposed in the cartridge adapted for fluid communication with an irrigation conduit and the pumping chamber.

Regarding claim 25, the cartridge includes tubing assembly means for interconnecting the cartridge cassette and the source of fluid (Fig 1 #26).

3. Claims 10,13,16,17,18,21-24, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by MINICK (US #5,462,256).

Minick teaches a "cartridge cassette (#10, Col 3 line 15) for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4, line 63) in fluid communication with a source of fluid and an irrigation conduit defined in part by a diaphragm (#16, Col 4 line 17) which is preloaded diaphragm is preloaded (#16 Col 4 line 17) against a reciprocating pump actuator (24); means for removably connecting the cartridge to the surgical irrigation pump to establish working communication with the pumping actuator (#71 ,Col 4 line 28); an upstream valve (#61, Col 5 line 6) disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and a downstream valve (#62, Col 5 line 8) disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber. The cartridge cassette includes a tab receiving recess (#71, Col 4 line 28). The diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm (Col 4 lines 24-35). Minick teaches "A cartridge cassette (#10, Col 3 line 15) for use with an surgical irrigation pump having a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4 line 63) in fluid communication with a source of fluid and an irrigation conduit; a tab-receiving groove (#71, Col 4 line 28) in the

cartridge cassette which is adapted to mate with a laterally outwardly projecting tab on the surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with the pumping actuator; an upstream valve (#61, Col 5 line 6) disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and a downstream valve (#62, Col 5 line 8) disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber.

Minick teaches "A cartridge cassette (#10, Col 3 line 15) adapted to mate with a surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with a pumping actuator, the cartridge cassette comprising: a pumping chamber (#22, Col 4 line 63); a flexible diaphragm covering the pumping chamber (#16 Col 4 line 17); an upstream valve (#61, Col 5 line 6) disposed in the cartridge adapted for fluid communication with a source of fluid and the pumping chamber; and a downstream valve (#62, Col 5 line 8) disposed in the cartridge adapted for fluid communication with an irrigation conduit and the pumping chamber.

4. Claims 10,11,16-18,21-25,28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by NATWICK (US #5,158,437).

Natwick teaches a "cartridge cassette (#300, Col 21 line 3) for use with an surgical irrigation pump having a pumping actuator (326), the cartridge cassette comprising: a pumping chamber (#350, Col 21 line 16) in fluid communication with a source of fluid and an irrigation conduit; the cartridge cassette includes a

preloaded (#340, Col 21 line 8) diaphragm (#340, Col 21 line 8) and the diaphragm has a graduated cross-sectional thickness dimension such that the thickness dimension increases from a central portion of the diaphragm to radially outward portions of the diaphragm (See Fig 18,19, Col 21 lines 21-28); means for removably connecting the cartridge to the surgical irrigation pump to establish working communication with the pumping actuator (#378, Col 21 line 62); an upstream valve (#306, Col 21 line 4) disposed in the cartridge and in fluid communication with the source of fluid and the pumping chamber; and a downstream valve (#308, Col 21 line 41) disposed in the cartridge and in fluid communication with the irrigation conduit and the pumping chamber. Further, there is tubing means to connect the cartridge with the fluid source (#310, #312).

Natwick teaches "A cartridge cassette (#300, Col 21 line 3) adapted to mate with a surgical irrigation pump to provide coupling of the cartridge cassette in the surgical irrigation pump to establish working communication with a pumping actuator, the cartridge cassette comprising: a pumping chamber (#350, Col 21 line 16); a flexible diaphragm covering the pumping chamber (#340, Col 21 line 8); an upstream valve (#306, Col 21 line 4) disposed in the cartridge adapted for fluid communication with a source of fluid and the pumping chamber; and a downstream valve (#308, Col 21 line 41) disposed in the cartridge adapted for fluid communication with an irrigation conduit and the pumping chamber.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, 19, 20, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natwick, Minick and DeVale as applied to claims 10, 17, and 24 above, and further in view of ATKINSON (US #5,647,852) and MEDVICK (US #4,665,943).

Natwick, Minick and DeVale all teach cartridge cassettes according to the limitations of claims 10, 17, and 24. They do not disclose the use of a spring-biased poppet valve in the upstream and downstream ports of the cassette. Instead, they disclose the use of a generic one-way flow valve.

Atkinson (#106, Col 4 line 13) discloses the use of poppet valves in a medical cartridge. Medvick teaches a spring-loaded poppet valve (#12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the cartridge cassette of Natwick, Minick, or DeVale with the spring-loaded poppet valves of Atkinson or Medvick for improved flow characteristics over other valve choices.

***Response to Arguments***

1. Applicant's arguments filed 5 February 2007 have been fully considered but they are not persuasive.

Regarding DeVale as applied to claim 24, applicant has argued that a graduated cross section is not shown. See Fig 6, which shows an indentation in the flexible membrane 88 at 92.

Regarding Minick, applicant has argued that notches 71 receive snaps and not tabs. Examiner believes that snaps and tabs are structurally equivalent as claimed by the applicant.

Applicant has also argued that the diaphragm is not "preloaded." Since the applicant has not given any definition (or description) of a "preloaded" state in their specification, the examiner takes the broadest reasonable interpretation to one of ordinary skill in the art and holds that any diaphragm which is in contact or comes into contact with the reciprocating pump actuator would be preloaded. See Figures 5 and 6. The same argument applies to Natwick, see Figures 17-19, which also show the diaphragm having a varying thickness between the distended portion of 302 and the flat portion (Fig 18).

### ***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth R. MacNeill whose telephone number is (571)-272-9970. The examiner can normally be reached on 7:00-3:30pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Sirmons can be reached on (571)272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ERM

*Elizabeth R. MacNeill*  
3/14/07

KEVIN C. SIRMONS  
SUPERVISORY PATENT EXAMINER

*Kevin C. Sirmons*